



**6712-01**

**FEDERAL COMMUNICATIONS COMMISSION**

**47 CFR Parts 1 and 30**

**[AU Docket No. 19-59; FCC 19-35]**

**Incentive Auction of Upper Microwave Flexible Use Service Licenses in the Upper 37 GHz, 39 GHz, and 47 GHz Bands for Next-Generation Wireless Services; Comment Sought on Competitive Bidding Procedures for Auction 103**

**AGENCY:** Federal Communications Commission.

**ACTION:** Proposed rule; proposed auction procedures.

**SUMMARY:** In this document, the Commission announces auctions of Upper Microwave Flexible Use Service licenses in the Upper 37 GHz (37.6-38.6 GHz), 39 GHz (38.6-40 GHz), and 47 GHz (47.2-48.2 GHz) bands, designated as Auction 103. This document proposes and seeks comment on competitive bidding procedures to be used for Auction 103.

**DATES:** Comments are due on or before May 15, 2019, and reply comments are due on or before May 30, 2019.

**ADDRESSES:** Comments may be filed using the Commission's Electronic Comment Filing System (ECFS) or by filing paper copies. Electronic Filing of Documents in Rulemaking Proceedings, 63 FR 24121 (May 1, 1998). All filings in response to the Auction 103 Comment Public Notice must refer to AU Docket No. 19-59. The Commission strongly encourages interested parties to file comments electronically and requests that an additional copy of all comments and reply comments be submitted electronically to the following email address: [auction103@fcc.gov](mailto:auction103@fcc.gov).

**Electronic Filers:** Comments may be filed electronically using the Internet by accessing the ECFS: <https://www.fcc.gov/ecfs/>. Filers should follow the instructions provided on the website for submitting comments. In completing the transmittal screen, filers should include their full name, U.S. Postal Service mailing address, and the applicable docket number, AU Docket No. 19-59.

Paper Filers: Parties who choose to file by paper must file an original and one copy of each filing. If more than one docket or rulemaking number appears in the caption of this proceeding, filers must submit two additional copies for each additional docket or rulemaking number. Filings can be sent by hand or messenger delivery, by commercial overnight courier, or by first-class or overnight U.S. Postal Service mail. All filings must be addressed to the Commission's Secretary, Office of the Secretary, Federal Communications Commission.

All hand-delivered or messenger-delivered paper filings for the Commission's Secretary must be delivered to FCC Headquarters at 445 12th St. SW., Room TW-A325, Washington, DC 20554. The filing hours are 8:00 a.m. to 7:00 p.m. All hand deliveries must be held together with rubber bands or fasteners. Any envelopes and boxes must be disposed of before entering the building.

Commercial overnight mail (other than U.S. Postal Service Express Mail and Priority Mail) must be sent to 9050 Junction Drive, Annapolis Junction, MD 20701.

U.S. Postal Service first-class, Express, and Priority mail must be addressed to 445 12th Street SW., Washington, DC 20554.

**FOR FURTHER INFORMATION CONTACT:** For auction legal questions, Mark Montano or Erik Beith in the Auctions Division of the Office of Economics and Analytics at (202) 418-0660. For general auction questions, the Auctions Hotline at (717) 338-2868. For Upper Microwave Flexible Use Service questions, Simon Banyai in the Wireless Telecommunications Bureau's Broadband Division at (202) 418-2487.

**SUPPLEMENTARY INFORMATION:** This is a summary of the Auction 103 Comment Public Notice, AU Docket No. 19-59, FCC 19-35, adopted on April 12, 2019 and released on April 15, 2019.

The Auction 103 Comment Public Notice includes the following attachment: Attachment A, Summary of MHz pops by PEA. The complete text of the Auction 103 Comment Public Notice, including its attachment, is available for public inspection and copying from 8:00 a.m. to 4:30 p.m. Eastern Time (ET) Monday through Thursday or from 8:00 a.m. to 11:30 a.m. ET on Fridays in the FCC Reference Information Center, 445 12th Street SW, Room CY-A257, Washington, DC 20554. The complete text is

also available on the Commission's website at [www.fcc.gov/auction/103/](http://www.fcc.gov/auction/103/) or by using the search function for AU Docket No. 19-59 on the Commission's ECFS web page at [www.fcc.gov/ecfs/](http://www.fcc.gov/ecfs/). Alternative formats are available to persons with disabilities by sending an email to [FCC504@fcc.gov](mailto:FCC504@fcc.gov) or by calling the Consumer & Governmental Affairs Bureau at (202) 418-0530 (voice), (202) 418-0432 (TTY). Pursuant to sections 1.415 and 1.419 of the Commission's rules, 47 CFR 1.415, 1.419, interested parties may file comments and reply comments on or before the dates indicated in the Auction 103 Comment Public Notice in AU Docket No. 19-59.

## **I. INTRODUCTION**

1. By the Auction 103 Comment Public Notice, the Commission seeks comment on the procedures to be used for Auction 103, the incentive auction of Upper Microwave Flexible Use Service (UMFUS) licenses in the Upper 37 GHz (37.6-38.6 GHz), 39 GHz (38.6-40 GHz), and 47 GHz (47.2-48.2 GHz) bands. The Commission proposes to use an ascending clock auction format for the licenses offered in Auction 103 and then hold a sealed bid assignment phase. The clock phase of Auction 103 serves as both the forward and reverse portions of the incentive auction by determining the prices and winners of new flexible use licenses as well as determining the amount of incentive payments to those incumbent licensees that relinquish spectrum usage rights.

## **II. LICENSES TO BE OFFERED IN AUCTION 103**

2. Auction 103 will offer UMFUS licenses for all available spectrum in the Upper 37 GHz (37.6-38.6 GHz), 39 GHz (38.6-40 GHz), and 47 GHz (47.2-48.2 GHz) bands. The Commission will offer 100 megahertz blocks of spectrum licensed by Partial Economic Area (PEA) service area. In combination, the Upper 37 GHz and the 39 GHz bands offer the largest amount of contiguous spectrum in the millimeter wave bands for flexible-use wireless services—a total of 2,400 megahertz—and the 47 GHz band will provide an additional 1,000 megahertz of millimeter wave spectrum for such services. The Commission proposes to limit Auction 103 to only these bands because licenses for no other UMFUS spectrum bands are ready and/or suitable to be auctioned at this same time.

3. The specific number of Upper 37 and 39 GHz licenses to be auctioned in each PEA will

be determined by the reconfiguration process, which concludes with the Initial Commitments of 39 GHz incumbents as described in the Spectrum Frontiers Fourth R&O, 84 FR 1618, February 2, 2019, and the Initial Reconfiguration Procedures Public Notice, 84 FR 11723, March 28, 2019. The licenses that will be available in the auction depend, in part, on upcoming decisions by those entities that currently hold 39 GHz licenses (referred to as “incumbents”) to either accept modified licenses, reconfigured to conform with the new band plan and service areas, or to relinquish all their existing spectrum usage rights in exchange for a share of the auction proceeds. If all incumbents choose to relinquish their licenses, the Commission will offer new licenses for 3,400 megahertz of spectrum across all three spectrum bands, or 34 licenses in every PEA. Following incumbents’ binding commitments, a public notice will announce the specific licenses available in the Upper 37 and 39 GHz bands for auction. This public notice will be released well in advance of the deadline for the submission of short-form applications to bid in Auction 103 so that potential applicants can make informed decisions whether to apply.

4. It is possible that an incumbent that chooses to receive modified licenses will decide to retain its partial PEA holding (i.e., covering less than the full geographic area of a PEA). The remaining portion of the spectrum block will thus have unassigned spectrum usage rights. The Commission does not propose to make this “white space” available in the auction.

5. Each of the bands available in Auction 103 will be licensed on an unpaired basis in 100 megahertz channel blocks by PEA. A licensee in these bands may provide any services permitted under a fixed or mobile allocation, as set forth in the non-Federal Government column of the Table of Frequency Allocations in section 2.106 of the Commission’s rules.

### **III. PROPOSED PRE-BIDDING PROCEDURES**

6. In the 2016 Spectrum Frontiers Order, 81 FR 79894, November 14, 2016, the Commission decided to conduct any auction of UMFUS licenses in conformity with the amended Part 1 rules. The Commission’s Part 1 rules require each applicant seeking to bid to acquire licenses in a spectrum auction to provide certain information in a short-form application (FCC Form 175), including ownership details and numerous certifications. This is a separate and distinct application from the

application (FCC Form 175-A) that incumbents must file concerning their existing license holdings. In other words, an incumbent wishing to bid to acquire licenses in the auction must file both applications. For Auction 103, the Commission is not proposing that short-form applicants provide any additional categories of information than those already required by its rules.

7. Prohibited Communications. In connection with the application process, the Initial Reconfiguration Procedures Public Notice discusses certain issues that are also applicable to entities that wish to acquire licenses in Auction 103. In particular, the Initial Reconfiguration Procedures Public Notice addresses the applicability to 39 GHz incumbents of section 1.2105(c)(1), which prohibits applicants from engaging in certain communications relating to bids and bidding strategies. As the public notice explains, the rule would apply not only to a short-form applicant's communication to another applicant, but also to (i) a specific entity that is considered a nationwide provider (here, AT&T, Sprint, T-Mobile, and Verizon Wireless) and (ii) an incumbent that files an application (FCC Form 175-A) as part of the process for it to select whether to retain or relinquish its existing license(s).

8. Joint Bidding Arrangements. That same analysis applies to the Part 1 rules' prohibition of joint bidding arrangements. To implement the prohibition on joint bidding arrangements, the Commission's rules require each auction applicant to certify in its short-form application that it has disclosed any arrangements or understandings of any kind relating to the licenses being auctioned to which it (or any party that controls or is controlled by it) is a party; the applicant must also certify that it (or any party that controls or is controlled by it) has not entered and will not enter into any arrangement or understanding of any kind relating directly or indirectly to bidding at auction with, among others, "any other applicant" or a nationwide provider. For Auction 103, therefore, a short-form applicant's certifications with respect to its arrangements or understandings will necessarily encompass an incumbent that files an FCC Form 175-A application (or any party that controls or is controlled by it).

**A. Bidding Credit Caps**

9. The Commission seeks comment on establishing reasonable caps on the total amount of

bidding credits that an eligible small business or rural service provider may be awarded for Auction 103.

10. In the 2016 Spectrum Frontiers Order, the Commission determined that an entity with average annual gross revenues for the preceding three years not exceeding \$55 million would be designated as a “small business” eligible for a 15% bidding credit, and that an entity with average annual gross revenues for the preceding three years not exceeding \$20 million would be designated as a “very small business” eligible for a 25% bidding credit. The Commission further determined that entities providing commercial communication services to a customer base of fewer than 250,000 combined wireless, wireline, broadband, and cable subscribers in primarily rural areas would be eligible for the 15% rural service provider bidding credit.

11. The Commission, in the 2015 Part 1 Report and Order, 80 FR 56764, September 18, 2015, established a process to implement a reasonable cap on the total amount of bidding credits that an eligible small business or rural service provider may be awarded in any auction, based on an evaluation of the expected capital requirements presented by the particular service and inventory of licenses being auctioned. The Commission determined that bidding credit caps would be implemented on an auction-by-auction basis, but resolved that, for any particular auction, the total amount of the bidding credit cap for small businesses would not be less than \$25 million, and the bidding credit cap for rural service providers would not be less than \$10 million. For Auction 101 and Auction 102, the Commission adopted a \$25 million cap on the total amount of bidding credits that may be awarded to an eligible small business in each auction (i.e., \$25 million in each auction) and a \$10 million cap on rural service provider bidding credits in each auction.

12. The Commission proposes to adopt the same bidding credit caps for Auction 103. Like Auction 101 and Auction 102, Auction 103 will offer licenses in the millimeter wave spectrum, and the Commission anticipates that the range of potential use cases suitable for the UMFUS bands, including localized fiber replacement and IoT, combined with the small license areas in these bands, may permit deployment of smaller scale networks with lower total costs. Further, based on past auction data, the Commission expects that a \$25 million cap on small business bidding credits will allow the substantial

majority of small businesses in the auction to take full advantage of the bidding credit program. The Commission therefore believes that its proposed cap will promote the statutory goals of providing meaningful opportunities for bona fide small businesses to compete in auctions and in the provision of spectrum-based services, without compromising the Commission's responsibility to prevent unjust enrichment and ensure efficient and intensive use of spectrum.

13. The Commission proposes to adopt a \$10 million cap on the total amount of bidding credits that may be awarded to an eligible rural service provider in Auction 103. The Commission anticipates that a \$10 million cap on rural service provider bidding credits will not constrain the ability of any rural service provider to participate fully and fairly in Auction 103. In addition, to create parity in Auction 103 among eligible small businesses and rural service providers competing against each other in smaller markets, the Commission proposes a \$10 million cap on the overall amount of bidding credits that any winning small business bidder may apply to winning licenses in markets with a population of 500,000 or less.

14. The Commission seeks comment on these proposed caps. Specifically, do the expected capital requirements associated with operating in the UMFUS bands, the potential number and value of UMFUS licenses, past auction data, or any other considerations justify a higher or lower cap for either type of bidding credit? Moreover, are there convincing reasons why the Commission should not achieve parity with the bidding credit caps in Auctions 101 and 102? Commenters are encouraged to identify unique circumstances and characteristics of this millimeter wave auction that should guide the Commission in establishing bidding credit caps, and to provide specific, data-driven arguments in support of their proposals.

15. The Commission reminds applicants applying for designated entity bidding credits that they should take due account of the requirements of the Commission's rules and implementing orders regarding de jure and de facto control of such applicants. These rules include a prohibition, which applies to all applicants (whether or not seeking bidding credits), against changes in ownership of the applicant that would constitute an assignment or transfer of control. Applicants should not expect to receive any

opportunities to revise their ownership structure after the filing of their short- and long-form applications, including making revisions to their agreements or other arrangements with interest holders, lenders, or others in order to address potential concerns relating to compliance with the designated entity bidding credit requirements.

**B. Information Procedures During the Auction Process**

16. As with most recent Commission spectrum license auctions, the Commission proposes to limit information available in Auction 103 in order to prevent the identification of bidders placing particular bids until after the bidding has closed. More specifically, the Commission proposes to not make public until after bidding has closed: (1) the license areas that an applicant selects for bidding in its short-form application (FCC Form 175), (2) the amount of any upfront payment made by or on behalf of an applicant for Auction 103, (3) any applicant's bidding eligibility, and (4) any other bidding-related information that might reveal the identity of the bidder placing a bid.

17. Once the bidding in Auction 103 starts, under these proposed limited information procedures (sometimes also referred to as anonymous bidding), information to be made public after each round of bidding would include for each category of license in each geographic area, the supply, the aggregate demand, the price at the end of the last completed round, and the price for the next round. However, the identities of bidders placing specific bids and the net bid amounts (reflecting bidding credits) would not be disclosed until after the close of bidding.

18. Bidders would have access through the bidding system to additional information related to their own bidding and bid eligibility. For example, bidders would be able to view their own level of eligibility, before and during the auction, through the FCC auction bidding system.

19. After the close of bidding, bidders' PEA selections, upfront payment amounts, bidding eligibility, bids, and other bidding-related actions would be made publicly available.

20. The Commission seeks comment on the details of its proposal for implementing limited information procedures, or anonymous bidding, in Auction 103. Commenters opposing the use of anonymous bidding in Auctions 103 should explain their reasoning and propose alternative information

rules.

#### **IV. DUE DILIGENCE**

21. Each potential bidder is solely responsible for investigating and evaluating all technical and marketplace factors that may have a bearing on the value of the licenses that it is seeking in Auction 103. Each bidder is responsible for assuring that, if it wins a license, it will be able to build and operate facilities in accordance with the Commission's rules. The Commission makes no representations or warranties about the use of this spectrum for particular services. Each applicant should be aware that a Commission auction represents an opportunity to become a Commission licensee, subject to certain conditions and regulations. This includes the established authority of the Commission to alter the terms of existing licenses by rulemaking, which is equally applicable to licenses awarded by auction. A Commission auction does not constitute an endorsement by the Commission of any particular service, technology, or product, nor does a Commission license constitute a guarantee of business success.

22. An applicant should perform its due diligence research and analysis before proceeding, as it would with any new business venture. Each potential bidder should perform technical analyses and/or refresh any previous analyses to assure itself that, should it become a winning bidder for any Auction 103 license, it will be able to build and operate facilities that will comply fully with all applicable technical and regulatory requirements. For example, licensees operating in the Upper 37 GHz band near specific Federal sites must coordinate with those Federal operations. The Commission strongly encourages each applicant to inspect any prospective sites for communications facilities located in, or near, the geographic area for which it plans to bid; confirm the availability of such sites; and familiarize itself with the Commission's rules regarding the National Environmental Policy Act.

23. The Commission strongly encourages each applicant to conduct its own research prior to Auction 103 in order to determine the existence of pending administrative, rulemaking, or judicial proceedings that might affect its decisions regarding participation in the auction.

24. The Commission also strongly encourages participants in Auction 103 to continue such research throughout the auction. The due diligence considerations mentioned in the document do not

constitute an exhaustive list of steps that should be undertaken prior to participating in this auction. As always, the burden is on the potential bidder to determine how much research to undertake, depending upon the specific facts and circumstances related to its interests.

25. The Commission also reminds bidders of the Commission's mobile spectrum holding policies applicable to the millimeter wave bands. Specifically, for purposes of reviewing proposed secondary market transactions, the Commission adopted a threshold of 1850 megahertz of combined millimeter wave spectrum in the 24 GHz, 28 GHz, 37 GHz, 39 GHz, and 47 GHz bands. In addition, the Commission found that it is in the public interest to review applications for initial licenses filed post-auction on a case-by-case basis using this same 1850 megahertz threshold.

## **V. PROPOSED BIDDING PROCEDURES**

### **A. Clock Phase**

#### **1. Clock Auction Design**

26. The Commission will conduct Auction 103 using an ascending clock auction design that will offer licenses for spectrum held by the Commission and for spectrum relinquished by incumbent licensees, and which will also determine incentive payments for relinquishing licensees. The first phase of the incentive auction will consist of successive clock bidding rounds in which bidders indicate their demands for categories of generic license blocks in specific partial economic areas (PEAs), followed by a second phase with bidding for frequency-specific license assignments, as the Commission decided in the Spectrum Frontiers Fourth R&O. The Commission seeks comment on the specific clock auction procedures it proposes to use for Auction 103. The Commission directs the Office, in conjunction with the Bureau, to release, concurrent with the Public Notice, technical guides that provide the mathematical details of the proposed auction procedures and algorithms for the clock and assignment phases of Auction 103. The information in the technical guides supplements the proposals in the Public Notice.

27. As in the clock auction used in the forward auction portion of the Broadcast Incentive Auction (Auction 1002) and the auction of licenses in the 24 GHz Band (Auction 102), the clock auction for Auction 103 will incorporate bidding for categories of generic spectrum blocks. The auction will

proceed in a series of rounds, with bidding being conducted simultaneously for all spectrum blocks available in the auction. During the clock phase, the FCC auction bidding system will announce prices for blocks in each category in each PEA, and qualified bidders will submit quantity bids for the number of blocks they seek. Bidding rounds will be open for predetermined periods of time, during which bidders will indicate their demands for blocks at the clock prices associated with the current round. As in SMR auctions, bidders will be subject to activity and eligibility rules that govern the pace at which they participate in the auction.

28. Under the ascending clock auction format adopted by the Commission, in each PEA, the clock price for a license category will increase from round to round if bidders indicate total demand that exceeds the number of blocks available in the category. The clock rounds will continue until, for all categories of blocks in all PEAs, the number of blocks demanded does not exceed the supply of available blocks. At that point, those bidders indicating demand for a block in a category at the final clock phase price will be deemed winning bidders. The final clock phase price for a generic block in a PEA will determine the incentive payment associated with a relinquished block of spectrum in the PEA.

29. Following the clock phase, the assignment phase will offer clock phase winners the opportunity to bid an additional amount for licenses with specific frequencies. All winning bidders, regardless of whether they bid in the assignment phase, will be assigned licenses for contiguous blocks within a category in a PEA.

30. The Commission seeks comment on specific procedures to implement this ascending clock auction and on alternative procedures for conducting, in a timely manner, an auction of Upper 37 GHz, 39 GHz, and 47 GHz licenses.

## **2. Determining Categories of Generic Blocks for Bidding**

31. The Spectrum Frontiers Fourth R&O determined that the Upper 37 GHz, 39 GHz, and 47 GHz bands would be reconfigured and licensed in uniform 100 megahertz blocks in each of 416 PEAs. To facilitate bidding in the clock phase, the Commission proposes to establish two categories of generic blocks in each PEA.

32. The Commission proposes that the first category will consist of the available blocks between 37.6–40 GHz. This category, designated Category M/N, will comprise a total of twenty-four blocks: ten in the Upper 37 GHz band (Blocks M1–M10) and 14 in the 39 GHz band (Blocks N1–N14). These 24 blocks represent a continuous swath of spectrum, and including them in a single bidding category should speed up the auction and give bidders greater flexibility to aggregate multiple contiguous spectrum blocks. A second category, Category P, will consist of the ten blocks between 47.2–48.2 GHz (Blocks P1–P10).

33. In each bidding round, a bidder will have the opportunity to bid for the quantity of generic blocks it demands in each of the two bidding categories. Bidding in the clock phase will determine a single price for all the generic blocks in each category in each PEA.

34. If an incumbent, in the Initial Commitment phase, chooses to accept a reconfigured license (full or partial) in one or more PEAs, the number of generic blocks available for bidding in the M/N category in those PEAs will be reduced accordingly. As a result, under this proposed procedure, there may be fewer than 24 blocks available for bidding in some PEAs in the M/N category. The Commission proposes to announce the full auction inventory—i.e., the number of blocks available in each category in each PEA—after the Initial Commitment phase has closed.

35. The Commission’s proposal for bidding on generic blocks in two categories is based on the close similarity of the blocks within each bidding category. To the extent a bidder has a preference for specific frequency licenses, the bidder may bid for its preferred blocks in the assignment phase. However, a bidder for a generic block cannot be assured that it will be assigned, or not be assigned, any particular frequency block. The Commission asks that commenters explain any concerns they may have about the interchangeability of generic blocks within the two proposed categories of generic blocks, bearing in mind potential tradeoffs between the number of categories and auction length, the ability of the auction system to assign contiguous blocks to winners of multiple blocks, and bidder manageability.

### **3. Determining Incentive Payments**

36. The final clock phase price for a generic licensing block in Category M/N in a given PEA

will determine the incentive payment associated with 100 megahertz of relinquished spectrum rights in that PEA. Further, an incumbent that relinquishes spectrum rights equivalent to fewer than 100 megahertz in the full geography of the PEA will be entitled to an incentive payment equal to the final clock phase price for a Category M/N block times the fraction of its relinquished rights, measured in MHz-pops, relative to the full number of MHz-pops in the PEA.

37. An incumbent that both relinquishes the equivalent of a full block of spectrum rights in Category M/N in a PEA and wins a generic block in the category in the same PEA will, in effect, receive an incentive payment credit equal to the final clock phase price and incur an obligation in the same amount, for a net clock phase payment of zero. If an incumbent chooses to bid for specific frequencies in the assignment phase, the incumbent will be obligated to pay any additional payment.

38. An incumbent that is eligible for bidding credits and that both relinquishes spectrum and bids for new licenses will receive a bidding credit discount only on its net cash payment for new licenses.

#### **4. Bidding Rounds**

39. Under this proposal, Auction 103 will consist of sequential bidding rounds, each followed by the release of round results. The initial bidding schedule will be announced in a public notice to be released at least one week before the start of bidding.

40. Auction 103 will be conducted over the Internet using the FCC auction bidding system. Bidders will also have the option of placing bids by telephone through a dedicated auction bidder line. The toll-free telephone number for the auction bidder line will be provided to qualified bidders prior to the start of bidding in the auction.

41. The Commission proposes that the initial bidding schedule may be adjusted in order to foster an auction pace that reasonably balances speed with the bidders' need to study round results and adjust their bidding strategies. Such changes may include the amount of time for bidding rounds, the amount of time between rounds, or the number of rounds per day, depending upon bidding activity and other factors. The Commission seeks comment on this proposal. Commenters on this issue should address the role of the bidding schedule in managing the pace of the auction, specifically discussing the

tradeoffs in managing auction pace by bidding schedule changes, by changing the activity requirement or the increment percentage, or by using other means.

## **5. Net Revenue Requirement**

42. The Commission proposes an aggregate net revenue requirement to ensure that the proceeds from Auction 103, net of bidding credits, are sufficient to cover incentive payment obligations to incumbents relinquishing spectrum. Under this proposal, the Commission will consider revenues from licenses in the Upper 37 GHz, 39 GHz, and the 47 GHz bands in determining whether the net revenue requirement has been met. The Commission proposes to make available to bidders an estimate of the current shortfall for meeting the net revenue requirement, updated after each round of bidding, until the requirement is met. The Commission proposes to indicate on the Public Reporting System (PRS) whether the requirement has been met. The Commission further proposes to consider only clock phase revenues in determining whether the net revenue requirement is met.

43. Under this proposal, the shortfall figure the Commission makes available prior to the close of bidding in the clock phase will be a conservative estimate. It will not be known whether the clock phase winners will be designated entities that can claim a bidding credit until the clock phase bidding has ended. Consequently, the revenue estimate that is used to calculate the shortfall for rounds before the net revenue requirement has been met will assume, for a category in a PEA with excess demand, that blocks are won by the bidders with the highest bidding credit percentages, to the extent that designated entities are among the bidders still demanding blocks in the category in the PEA. This includes a check to consider bidding credit caps. In so doing, the Commission avoids a potential situation whereby the net revenue requirement appears to be met, but then actual net revenues are insufficient to cover incentive payments when bidding credits are considered. For a category in a PEA without excess demand, the requirement will be evaluated based on a true calculation of net revenue after bid processing, rather than on the estimate, since information on how to apply bidding credits precisely will be available in that case. If the net revenue requirement has not been met after a round, the estimated shortfall will be calculated as the incentive payments across all incumbents after the round minus the revenue estimate

across all categories and PEAs, rounded up to the nearest \$1 million.

44. The Commission proposes to consider only clock phase revenues—not assignment phase revenues—in determining whether the net revenue requirement is met. Revenues from assignment phase payments are expected to be small relative to those from the clock phase and therefore less likely to contribute significantly to meeting the revenue requirement. Because assignment phase payments are determined using a second-price rule, an individual bidder wishing to boost revenues intentionally will have little ability to do so. In addition, the Commission is mindful of the additional time required to conduct assignment rounds, and it does not wish to require bidders or Commission staff to invest the additional time in the assignment phase if ultimately no licenses will be assigned.

45. If the net revenue requirement has been satisfied at the time that the clock phase bidding stops for both categories of blocks, the auction system will determine the winning bidders of generic blocks, and the auction will proceed to the assignment phase. If the net revenue requirement has not been satisfied at the time bidding stops in the clock phase, the auction will end, and no new licenses will be assigned. Incumbents in the 39 GHz band will retain their original licenses pending further decisions by the Commission.

46. The Commission seeks comment on its proposed net revenue requirement and on its proposals to make available a conservative estimate of the shortfall after each round and to consider only clock phase revenues in determining whether the requirement has been met.

## **6. Stopping Rule**

47. The Commission proposes a simultaneous stopping rule for the clock phase of Auction 103, under which both categories of licenses in all PEAs will remain available for bidding until the bidding stops on both categories. Specifically, the Commission proposes that the clock phase of bidding will end for both categories of blocks after the first round in which there is no excess demand in any category in any PEA. Consequently, under this approach, it is not possible to determine in advance how long Auction 103 would last.

48. The Commission seeks comment on its proposed simultaneous stopping rule.

## **7. Upfront Payments and Bidding Eligibility**

49. In keeping with the Commission's usual practice in spectrum license auctions, the Commission proposes that applicants be required to submit upfront payments as a prerequisite to becoming qualified to bid. The upfront payment is a refundable deposit made by an applicant to establish its eligibility to bid on licenses. Upfront payments that are related to the inventory of licenses being auctioned protect against frivolous or insincere bidding and provide the Commission with a source of funds from which to collect payments owed at the close of bidding.

50. The Commission proposes to assign each PEA a specific number of bidding units, equal to one bidding unit per \$10 of the upfront payment. The number of bidding units for a given PEA is fixed and does not change during the auction as prices change. The bidding unit amount assigned to a specific PEA will apply to a single generic block for that PEA. Bidding units will be used for purposes of measuring bidder eligibility and bidding activity. The Commission further proposes to determine the bidding units for a PEA based on the same weights it will use in the reconfiguration process and in Round Zero to quantify the weighted MHz-pops of an incumbent's spectrum holdings. Since weights are not yet determined, Attachment A to the document lists the MHz-pops of each PEA, and the Commission will update Attachment A with bidding units and upfront payment amounts when the weights are available.

51. Taking into account the various purposes of upfront payments, the Commission proposes to use a tiered approach, under which upfront payment amounts will vary by market population. The Commission proposes upfront payments for a generic block in a PEA based on \$0.001 per weighted MHz-pop for PEAs 1–50, \$0.0002 per weighted MHz-pop for PEAs 51–100, and \$0.0001 per weighted MHz-pop in other PEAs. The proposed upfront payments equal approximately half the proposed minimum opening bids. The Commission seeks comment on the proposed method for calculating upfront payment amounts. For informational purposes, Attachment A shows the unweighted MHz-pops per each PEA and the result of multiplying the unweighted MHz-pops by \$0.001, \$0.0002, or \$0.0001 depending on the PEA.

52. The Commission further proposes that the amount of the upfront payment submitted by a

bidder will determine its initial bidding eligibility in bidding units. To the extent that bidders wish to bid on multiple generic blocks simultaneously, they will need to ensure that their upfront payment provides enough eligibility to cover multiple blocks. Under the proposed approach to calculating bidding units, the generic Category M/N and Category P blocks in a PEA will be assigned the same number of bidding units, which will facilitate bidding across categories.

53. Under the proposed approach, a bidder's upfront payment will not be attributed to blocks in a specific PEA or PEAs. If an applicant is found to be qualified to bid on more than one block being offered in Auction 103, such a bidder may place bids on multiple blocks, provided that the total number of bidding units associated with those blocks does not exceed its current eligibility. A bidder cannot increase its eligibility during the auction; it can only maintain its eligibility or decrease its eligibility. Thus, in calculating its upfront payment amount and hence its initial bidding eligibility, an applicant must determine the maximum number of bidding units on which it may wish to bid in any single round and submit an upfront payment amount covering that total number of bidding units. The Commission seeks comment on these proposals.

54. In connection with the proposed upfront payment amounts and corresponding bidding eligibility, the Commission tentatively concludes that it will not adopt a different upfront payment procedure for incumbent bidders relinquishing spectrum rights. The Commission asks any commenter that disagrees with this tentative conclusion not to adopt procedures that would allow incumbents to make their upfront payment with significantly less cash to consider whether such an approach would give the Commission sufficient funds from which to collect default payments, given that defaults may occur for reasons other than non-payment of winning bids. In addition, would the approach serve to deter insincere bidding, given that an incumbent's bidding eligibility would derive from its intended relinquishments rather than from its intended bidding for new licenses? If license relinquishments could be credited toward upfront payments, would the associated bidding eligibility apply to any PEA or just to the PEA in which a license is relinquished, and if the latter, how would that comport with eligibility accruing from cash upfront payments, which is not PEA-specific?

## **8. Activity Rule, Activity Rule Waivers, and Reducing Eligibility**

55. In order to ensure that the auction closes within a reasonable period of time, an activity rule requires bidders to bid actively throughout the auction, rather than wait until late in the auction before participating. For a clock auction, a bidder's activity in a round for purposes of the activity rule will be the sum of the bidding units associated with the bidder's demands as applied by the auction system during bid processing. Bidders are required to be active on a specific percentage of their current bidding eligibility during each round of the auction. Failure to maintain the requisite activity level will result in a reduction in the bidder's eligibility, possibly curtailing or eliminating the bidder's ability to place additional bids in the auction.

56. The Commission proposes to require that bidders maintain a fixed, high level of activity in each round of Auction 103 in order to maintain bidding eligibility. Specifically, the Commission proposes to require that bidders be active on between 90 and 100% of their bidding eligibility in all clock rounds, with an initial activity requirement of 95%. Thus, the activity rule would be satisfied when a bidder has bidding activity on blocks with bidding units that total 90 to 100% of its current eligibility in the round. If the activity rule is met, then the bidder's eligibility does not change in the next round. The Commission proposes to calculate bidding activity based on the bids that are applied by the FCC auction bidding system. That is, if a bidder requests a reduction in the quantity of blocks it demands in a category, but the FCC auction bidding system does not apply the request because demand for the category would fall below the available supply, the bidder's activity will reflect its unreduced demand. If the activity rule is not met in a round, a bidder's eligibility automatically would be reduced. The activity requirements may be changed during the auction.

57. The Commission invites comment on this proposal, in particular on whether to set the activity requirement between 90% and 100%. Commenters may wish to address the relationship between the proposed activity rule and the ability of bidders to switch their demands across PEAs or across categories of blocks within a PEA. The Commission encourages any commenters that oppose an activity rule in this range to explain their reasons with specificity.

58. The Commission points out that under its proposed clock auction, bidders are required to indicate their demands in every round, even if their demands at the new round's prices are unchanged from the previous round. Missing bids—bids that are not reconfirmed—are treated by the auction bidding system as requests to reduce to a quantity of zero blocks for the category. If these requests are applied, or applied partially, a bidder's bidding activity, and hence its bidding eligibility for the next round, will be reduced.

59. For Auction 103, the Commission does not propose to provide for activity rule waivers to preserve a bidder's eligibility. This proposal is consistent with the ascending clock auction procedures adopted for Auctions 1002 and 102. In previous Commission multiple round auctions, when a bidder's eligibility in the current round was below a required minimum level, the bidder was able to preserve its current level of eligibility with a limited number of activity rule waivers. The clock auction, however, relies on precisely identifying the point at which demand falls to equal supply to determine winning bidders and final prices. Allowing waivers would create uncertainty with respect to the exact level of bidder demand, interfering with the basic clock price-setting and winner determination mechanisms. Moreover, uncertainty about the level of demand would affect the way bidders' requests to reduce demand are processed by the FCC auction bidding system. The Commission seeks comment on this proposal.

## **9. Acceptable Bids**

### **a. Reserve Price or Minimum Opening Bids**

60. The Commission seeks comment on the use of a minimum opening bid amount and/or reserve price for Auction 103, as it does prior to the start of each auction.

61. A reserve price is an absolute minimum price below which a construction permit or license will not be sold in a given auction. A minimum opening bid, on the other hand, is the minimum bid price set at the beginning of the auction below which no bids are accepted. In Auction 103, if there are any PEAs in which demand for blocks never exceeds the supply of blocks, the minimum opening bid will serve as the basis for determining incentive payments to incumbents relinquishing spectrum in a PEA

(because the final clock phase price will be equal to the minimum opening bid).

62. The Commission proposes to establish minimum opening bid amounts for Auction 103. Based on the Commission's experience in past auctions, a minimum opening bid amount is an effective bidding tool for accelerating the competitive bidding process. At the beginning of the clock phase, a bidder will indicate how many blocks in a generic license category in a PEA it demands at the minimum opening bid price. For Auction 103, the Commission proposes to establish initial clock prices, or minimum opening bids, as set forth in the following paragraph. The Commission does not propose to establish license-specific reserve prices that are different from minimum opening bid amounts for the licenses to be offered in Auction 103.

63. For Auction 103, the Commission proposes to calculate minimum opening bid amounts using a formula based on bandwidth and license area population, incorporating the same weights it will use in the reconfiguration process and Round Zero to quantify the weighted MHz-pops of an incumbent's spectrum holdings. This is similar to the Commission's approach in many previous spectrum auctions of weighting by an index of relative prices from prior auctions. Since weights are not yet determined, Attachment A of the document lists the MHz-pops of each PEA, and the Commission will update Attachment A with bidding units and upfront payment amounts when the weights are available.

64. The Commission proposes to use a tiered approach, under which minimum opening bid amounts will vary by market population. The Commission proposes minimum opening bid amounts for a generic block in a PEA based on \$0.002 per weighted MHz-pop for PEAs 1–50, \$0.0004 per weighted MHz-pop for PEAs 51–100, and \$0.0002 per weighted MHz-pop in other PEAs. For informational purposes, Attachment A shows the unweighted MHz-pops per each PEA and the result of multiplying the unweighted MHz-pops by \$0.002, \$0.0004, or \$0.0002 depending on the PEA. The Commission seeks comment on the proposed method for calculating minimum opening bid amounts. If commenters believe that the minimum opening bid amounts will result in unsold licenses or are not reasonable amounts at which to start bidding or as a minimum for incentive payments, they should explain why this is so and comment on the desirability of an alternative approach. Commenters should support their claims with

valuation analyses and suggested amounts or formulas for reserve prices or minimum opening bids.

65. In establishing minimum opening bid amounts, the Commission particularly seeks comment on factors that could reasonably have an impact on bidders' valuation of the spectrum, including the type of service offered, market size, population covered, any other relevant factors.

66. Commenters may also wish to address the general role of minimum opening bids in managing the pace of the auction. For example, commenters could compare using minimum opening bids—e.g., by setting higher minimum opening bids to reduce the number of rounds it takes licenses to reach their final prices—to other means of controlling auction pace, such as changes to bidding schedules, percentage increments, or activity requirements.

#### **b. Clock Price Increments**

67. Under the proposed clock auction format for Auction 103, after bidding in the first round and before each subsequent round, the FCC auction bidding system will announce a clock price for the next round, which is the highest price to which bidders can respond during the round. The Commission proposes to set the clock price for each category in each specific PEA for a round by adding a fixed percentage increment to the price for the previous round. As long as total demand for blocks in a category exceeds the supply of blocks, the percentage increment will be added to the clock price from the prior round. If demand equaled supply at an intra-round bid price in a previous round, then the clock price for the next round will be set by adding the percentage increment to the intra-round bid price.

68. The Commission proposes to apply an increment that is between 5% and 20% and generally to apply the same increment percentage to all categories in all PEAs. The Commission proposes to set the initial increment within this range, and to adjust the increment as rounds continue. The proposed 5-20% increment range will allow the FCC to set a percentage that manages the auction pace, taking into account bidders' needs to evaluate their bidding strategies while moving the auction along quickly. The Commission also proposes that increments may be changed during the auction on a PEA-by-PEA or category-by-category basis based on bidding activity to assure that the system can offer appropriate price choices to bidders.

**c. Intra-Round Bids**

69. The Commission proposes to permit a bidder to make intra-round bids by indicating a point between the previous round's price and the new clock price at which its demand for blocks in a category changes. In placing an intra-round bid, a bidder would indicate a specific price and a quantity of blocks it demands if the price for blocks in the category should increase beyond that price.

70. Intra-round bids would be optional; a bidder may choose to express its demands only at the clock prices. This proposal to permit intra-round bidding would allow the auction system to use relatively large clock increments, thereby speeding the clock phase, without running the risk that a jump in the clock price will overshoot the market clearing price—the point at which demand for blocks equals the available supply.

**10. Changing Demand, Bid Types, and Bid Processing**

71. The Commission proposes that the FCC auction bidding system not apply a bidder's request to reduce the quantity of blocks it demands in a category if the reduction will result in aggregate demand falling below the available supply of blocks in the category.

72. Under the ascending clock format proposed for Auction 103, a bidder will indicate in each round the quantity of blocks in each category in each PEA that it demands starting at a given price, indicating that at prices above the bid price it is willing to get the changed quantity. A bidder can express its demands at the clock price or at an intra-round price, and bid quantities can represent an increase or a decrease over the bidder's previous demands for blocks in a category.

73. If a bidder demands fewer blocks in a category than it did in the previous round, the FCC auction bidding system will treat the bid as a request to reduce demand that will be implemented only if aggregate demand would not fall below the available supply of blocks in the category. In addition, if a bidder demands more blocks in a category than it did in the previous round, the FCC auction bidding system will treat the bid as a request to increase demand that will be implemented only if the bidder has sufficient bidding eligibility to cover the increase.

74. The Commission also proposes to process bids after a round ends in order of price point,

where the price point represents the percentage of the bidding interval for the round. Under this proposal, once a round ends, the FCC auction bidding system will process bids in ascending order of price point, first considering intra-round bids in order of price point and then bids at the clock price. The system will consider bids at the lowest price point for all categories in all PEAs, then look at bids at the next price point in all areas, and so on. In processing the bids submitted in the round, the FCC auction bidding system will determine the extent to which there is excess demand for each category in each PEA in order to determine whether a bidder's requested reduction in demand can be implemented.

75. For a given category in a given PEA, the uniform price for all blocks in the category will stop increasing when aggregate demand no longer exceeds the available supply of blocks in the category. If no further bids are placed, the final clock phase price for the category will be the stopped price.

76. In order to facilitate bidding for multiple blocks in a PEA, the Commission proposes that bidders will be permitted to make two types of bids: simple bids and switch bids.

77. A "simple" bid indicates a desired quantity of licenses in a category at a price (either the clock price or an intra-round price). Simple bids may be applied partially. A simple bid that involves a reduction from the bidder's previous demands may be implemented partially if aggregate excess demand is insufficient to support the entire reduction. A simple bid to increase a bidder's demand in a category may be applied partially if the total number of bidding units associated with the bidder's demand, given all changes in demand that have been applied so far in the bid processing, exceeds the bidder's bidding eligibility for the round.

78. A "switch" bid allows the bidder to request to move its demand for a quantity of licenses from the M/N category to the P category, or vice versa, within the same PEA. A switch bid may be applied partially, but the increase in demand in the "to" category will always match in quantity the reduction in the "from" category.

79. The proposed bid types will allow bidders to express their demand for blocks in the next clock round without running the risk that they will be forced to purchase more spectrum at a higher price than they wish. When a bid to reduce demand can be applied only partially, the uniform price for the

category will stop increasing at that point, since the partial application of the bid results in demand falling to equal supply. Hence, a bidder that makes a simple bid or a switch bid that cannot be fully applied will not face a price for the remaining demand that is higher than its bid price.

80. Because in any given round some bidders may increase demands for licenses in a category while others may request reductions, the price point at which a bid is considered by the auction bidding system can affect whether it is applied. In addition to proposing that bids be considered by the system in order of increasing “price point,” the Commission further proposes that bids not applied because of insufficient aggregate demand or insufficient eligibility be held in a queue and considered, again in order, if there should be excess demand (in the case of a bid to reduce demand) or if the bidder’s demand in other categories and PEAs is reduced (in the case of a bid to increase demand) later in the processing after other bids are processed.

81. More specifically, under the proposed procedures, once a round closes, the FCC auction bidding system will process the bids by first considering the bid submitted at the lowest price point and determine whether it can be applied given aggregate demand as determined most recently and given the associated bidder’s eligibility. If the bid can be applied, or partially applied, the number of licenses the bidder demands will be adjusted, and aggregate demand will be recalculated accordingly. If the bid cannot be applied in part or in full, the unfulfilled bid, or portion thereof, will be held in a queue to be considered later during bid processing for that round. The FCC auction bidding system will then consider the bid submitted at the next highest price point, accepting it in full, in part, or not at all, given recalculated aggregate demand and given the associated bidder’s eligibility. Any unfulfilled requests will again be held in a queue, and aggregate demand will again be recalculated. Every time a bid or part of a bid is applied and aggregate demand has been recalculated, the unfulfilled bids held in queue will be reconsidered, in the order of their original price points (and by pseudo-random number, in the case of tied price points). The auction bidding system will not carry over unfulfilled bid requests to the next round, however. The bidding system will advise bidders of the status of their bids when round results are released.

82. After the bids are processed in each round, the FCC auction bidding system will announce new clock prices to indicate a range of acceptable bid prices for the next round. Each bidder will be informed of the number of blocks in a category on which it holds bids, the aggregate demand for each category in a PEA, and, if demand fell to equal supply during the round, the intra-round price point at which that occurred.

83. No Bidding Aggregation. The Commission does not propose to incorporate any form of package bidding procedures into the clock phase of Auction 103. Package bidding would add complexity to the bidding process, and the Commission does not see significant benefit from such procedures, given the proposed clock auction and assignment phase format. A bidder may bid on multiple blocks in a PEA and in multiple PEAs. The Commission proposes that the assignment phase will assign contiguous blocks to winners of multiple blocks in a category in a PEA and give bidders an opportunity to express their preferences for specific frequency blocks, thereby facilitating aggregations of licenses.

84. The Commission seeks comment on its proposals regarding reducing demand, bid types, and bid processing for Auction 103.

## **11. Winning Bids in the Clock Phase**

85. Under the proposed clock auction format for Auction 103, as long as the net revenue requirement has been satisfied, bidders that are still expressing demand for a quantity of blocks in a category in a PEA at the time the stopping rule is met will become the winning bidders and will be assigned specific frequencies in the assignment phase.

## **12. Bid Removal and Bid Withdrawal**

86. The FCC auction bidding system allows each bidder to remove any of the bids it placed in a round before the close of that round. By removing a bid placed within a round, a bidder effectively “unsubmits” the bid. Once a round closes, a bidder may no longer remove a bid.

87. Unlike an SMR auction, there are no provisionally winning bids in a clock auction. As a result, the concept of bid withdrawals is inapplicable to a clock auction. As proposed, however, bidders in Auction 103 may request to reduce demand for generic blocks.

## **B. Assignment Phase**

### **1. Sequencing and Grouping of PEAs**

88. The Commission proposes to sequence assignment rounds to make it easier for bidders to incorporate frequency assignments from previously assigned areas into their bid preferences for other areas, recognizing that bidders winning multiple blocks of licenses generally will prefer contiguous blocks across adjacent PEAs. The Commission proposes to conduct rounds for the largest markets first to enable bidders to establish a “footprint” from which to work.

89. Specifically, the Commission proposes to conduct a separate assignment round for each of the top 20 PEAs and to conduct these assignment rounds sequentially, beginning with the largest PEAs. Once the top 20 PEAs have been assigned, the Commission proposes to conduct, for each Regional Economic Area Grouping (REAG), a series of assignment rounds for the remaining PEAs within that region. The Commission further proposes, where feasible, to group into a single market for assignment any non-top 20 PEAs within a region in which the supply of blocks is the same in each category, the same entities (winning bidders and incumbents keeping modified licenses) need to be assigned the same number of blocks in each category, and all are subject to the small markets bidding cap or all are not subject to the cap, which will also help maximize contiguity across PEAs. The Commission proposes to sequence the assignment rounds within a REAG in descending order of population for a PEA group or individual PEA. The Commission further proposes to conduct the bidding for the different REAGs in parallel in order to reduce the total amount of time required to complete the assignment phase.

90. The Commission seeks comment on these proposals for sequencing assignment rounds, including conducting separate rounds for the top 20 PEAs, and on the proposal to group PEAs for bidding under some circumstances within REAGs.

### **2. Acceptable Bids and Bid Processing**

91. In each assignment round, a bidder will be asked to assign a price to one or more possible frequency assignments for which it wishes to express a preference, consistent with its winnings for generic blocks in the clock phase. The price will represent a maximum payment that the bidder is willing

to pay, in addition to the base price established in the clock phase for the generic blocks, for the frequency-specific license or licenses in its bid. The Commission proposes that a bidder will submit its preferences for blocks it won in the Upper 37 and 39 GHz bands and the 47 GHz band separately, rather than submitting bids for preferences that include blocks in both categories. That is, if a bidder won one block in category M/N and two blocks in category P, it would not be able to submit a single bid amount for an assignment that included all three blocks. Instead, it would submit its bid or bids for assignments in category M/N separately from its bid or bids for assignments in category P.

92. The Commission proposes to use an optimization approach to determine the winning frequency assignment for each category in each PEA or PEA group. The Commission proposes that the auction system will select the assignment that maximizes the sum of bid amounts among all assignments that satisfy the contiguity requirements. The Commission proposes that the additional price a bidder will pay for a specific frequency assignment (above the base price) will be calculated consistent with a generalized “second price” approach—that is, the winner will pay a price that would be just sufficient to result in the bidder receiving that same winning frequency assignment while ensuring that no group of bidders is willing to pay more for an alternative assignment that satisfies the contiguity restrictions. This price will be less than or equal to the price the bidder indicated it was willing to pay for the assignment. The Commission proposes to determine prices in this way because it facilitates bidding strategy for the bidders, encouraging them to bid their full value for the assignment, knowing that if the assignment is selected, they will pay no more than would be necessary to ensure that the outcome is competitive.

93. The Commission seeks comment on these proposed procedures. In particular, the Commission asks whether bidders would find it useful to be able to submit a single bid for assignments that include frequencies in both categories, in cases where the bidder won blocks in both category M/N and category P.

## **VI. POST-AUCTION PROCESS**

### **A. Additional Default Payment Percentage**

94. Any winning bidder that defaults or is disqualified after the close of an auction (i.e., fails

to remit the required down payment by the specified deadline, fails to submit a timely long-form application, fails to make full and timely final payment, or is otherwise disqualified) is liable for a default payment under Section 1.2104(g)(2) of the rules. This payment consists of a deficiency payment, equal to the difference between the amount of the bidder's winning bid and the amount of the winning bid the next time a license covering the same spectrum is won in an auction, plus an additional payment equal to a percentage of the defaulter's bid or of the subsequent winning bid, whichever is less.

95. The Commission's rules provide that, in advance of each auction, it will establish a percentage between 3% and 20% of the applicable winning bid to be assessed as an additional default payment. As the Commission has indicated, the level of this additional payment in each auction will be based on the nature of the service and the licenses being offered.

96. For Auction 103, the Commission proposes to establish an additional default payment of 15%, which is consistent with that adopted for Auctions 101 and 102. As noted in the CSEA/Part 1 Report and Order, 71 FR 6214, February 7, 2006, defaults weaken the integrity of the auction process and may impede the deployment of service to the public, and an additional default payment of up to 20% will be more effective in deterring defaults than the 3% used in some earlier auctions. At the same time, the Commission does not believe the detrimental effects of any defaults in Auction 103 are likely to be unusually great. In light of these considerations, the Commission proposes for Auction 103 an additional default payment of 15% of the relevant bid. The Commission seeks comment on this proposal.

97. In case they are needed for post-auction administrative purposes, the bidding system will calculate individual per-license prices that are separate from final auction payments, which are calculated on an aggregate basis. The bidding system will apportion to individual licenses any assignment phase payments and any capped bidding credit discounts, since in both cases, a single amount may apply to multiple licenses.

## **VII. TUTORIAL AND ADDITIONAL INFORMATION FOR APPLICANTS**

98. The Commission intends to provide additional information on the bidding system and to offer demonstrations and other educational opportunities for applicants in Auction 103 to familiarize

themselves with the FCC auction application system and the auction bidding system. For example, the Commission intends to release an online tutorial that will help applicants understand the procedures to be followed in the filing of their auction short-form applications (FCC Form 175) for Auction 103.

### **VIII. PROCEDURAL MATTERS**

99. Supplemental Initial Regulatory Flexibility Analysis. As required by the Regulatory Flexibility Act of 1980, as amended (RFA), the Commission has prepared a Supplemental Initial Regulatory Flexibility Analysis (Supplemental IRFA) of the possible significant economic impact on small entities of the policies and rules addressed in the document to supplement the Commission's Initial and Final Regulatory Flexibility Analyses completed in the Spectrum Frontiers Fourth R&O, 2017 Spectrum Frontiers Order, 83 FR 37, January 2, 2018, 2016 Spectrum Frontiers Order, and other Commission orders pursuant to which Auction 103 will be conducted. Written public comments are requested on the Supplemental IRFA. Comments must be identified as responses to the Supplemental IRFA and must be filed by the same deadline for comments on the proposals in the Public Notice. The Commission will send a copy of the Public Notice, including the Supplemental IRFA, to the Chief Counsel for Advocacy of the Small Business Administration (SBA). In addition, the document and Supplemental IRFA (or summaries thereof) will be published in the Federal Register.

100. Need for, and Objectives of, the Proposed Rules. The document sets forth the proposed auction procedures for those entities that seek to bid to acquire licenses in Auction 103. The document seeks comment on proposed procedural rules to govern Auction 103, which will auction Upper Microwave Flexible Use Service (UMFUS) licenses in the Upper 37 GHz (37.6-38.6 GHz), 39 GHz (38.6-40 GHz), and 47 GHz (47.2-48.2 GHz) bands. This process is intended to provide notice of and adequate time for potential applicants to comment on proposed auction procedures. To promote the efficient and fair administration of the competitive bidding process for all Auction 103 participants, the Commission seeks comment on the following proposed procedures: (1) establishment of bidding credit caps for eligible small businesses and rural service providers in Auction 103; (2) use of a clock auction format for Auction 103 under which each qualified bidder will indicate in successive clock bidding

rounds its demands for categories of generic blocks in specific geographic areas; (3) a specific minimum opening bid amount for generic blocks in each PEA available in Auction 103; (4) a specific upfront payment amount for generic blocks in each PEA available in Auction 103; (5) establishment of a bidder's initial bidding eligibility in bidding units based on that bidder's upfront payment through assignment of a specific number of bidding units for each generic block; (6) use of an activity rule that would require bidders to bid actively during the auction rather than waiting until late in the auction before participating; (7) a requirement that bidders be active on between 90% and 100% of their bidding eligibility in all regular clock rounds; (8) establishment of acceptable bid amounts, including clock price increments and intra-round bids, along with a proposed methodology for calculating such amounts; (9) a proposed methodology for processing bids and requests to reduce demand; (10) a procedure for breaking ties if identical high bid amounts are submitted on a license in a given round; (11) establishment of an assignment phase that will determine which frequency-specific licenses will be won by the winning bidders of generic blocks during the clock phase; and (12) establishment of an additional default payment of 15% under section 1.2104(g)(2) of the rules in the event that a winning bidder defaults or is disqualified after the auction.

101. The proposed procedures for the conduct of Auction 103 constitute the more specific implementation of the competitive bidding rules contemplated by Parts 1 and 30 of the Commission's rules and the underlying rulemaking orders, including the Spectrum Frontiers Fourth R&O, 2017 Spectrum Frontiers Order, 2016 Spectrum Frontiers Order, and relevant competitive bidding orders, and are fully consistent therewith.

102. Legal Basis. The Commission's statutory obligations to small businesses under the Communications Act of 1934, as amended, are found in Sections 309(j)(3)(B) and 309(j)(4)(D). The statutory basis for the Commission's competitive bidding rules is found in various provisions of the Communications Act of 1934, as amended, including 47 U.S.C. 154(i), 301, 302, 303(e), 303(f), 303(r), 304, 307, and 309(j). The Commission has established a framework of competitive bidding rules, updated most recently in 2015, pursuant to which it has conducted auctions since the inception of the

auction program in 1994 and would conduct Auction 103.

103. Description and Estimate of the Number of Small Entities to Which the Proposed Rules Will Apply. The RFA directs agencies to provide a description of, and, where feasible, an estimate of the number of small entities that may be affected by the proposed rules and policies, if adopted. The RFA generally defines the term “small entity” as having the same meaning as the terms “small business,” “small organization,” and “small governmental jurisdiction.” In addition, the term “small business” has the same meaning as the term “small business concern” under the Small Business Act. A “small business concern” is one which: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the SBA.

104. As noted above, Regulatory Flexibility Analyses were incorporated into the Spectrum Frontiers Fourth R&O, 2017 Spectrum Frontiers Order, and 2016 Spectrum Frontiers Order. In those analyses, the Commission described in detail the small entities that might be significantly affected. In the Public Notice, the Commission incorporates by reference the descriptions and estimates of the number of small entities from the previous Regulatory Flexibility Analyses in the Spectrum Frontiers Fourth R&O, 2017 Spectrum Frontiers Order, and 2016 Spectrum Frontiers Order.

105. Based on the information available in the Commission’s public Universal Licensing System (ULS), the Commission estimates there are currently 16 incumbent 39 GHz licensees. Of these incumbent 39 GHz licensees, the Commission estimates that up to 8 could be considered a “small entity” under the RFA.

106. Description of Projected Reporting, Recordkeeping, and Other Compliance Requirements for Small Entities. The Commission designed the auction application process itself to minimize reporting and compliance requirements for applicants, including small business applicants. In the first part of the Commission’s two-phased auction application process, parties desiring to participate in an auction file streamlined, short-form applications in which they certify under penalty of perjury as to their qualifications. Eligibility to participate in bidding is based on an applicant’s short-form application and certifications, as well as its upfront payment. In the second phase of the process, winning bidders file a

more comprehensive long-form application. Thus, an applicant which fails to become a winning bidder does not need to file a long-form application and provide the additional showings and more detailed demonstrations required of a winning bidder.

107. The Commission does not expect the processes and procedures proposed in the document will require small entities to hire attorneys, engineers, consultants, or other professionals to participate in Auction 103 and comply with the procedures the Commission ultimately adopts because of the information, resources, and guidance the Commission makes available to potential and actual participants. For example, the Commission intends to release an online tutorial that will help applicants understand the procedures for filing of the auction short-form applications (FCC Form 175). The Commission also intends to make information on the bidding system available and offer demonstrations and other educational opportunities for applicants in Auction 103 to familiarize themselves with the FCC auction application system and the auction bidding system. By providing these resources, the Commission expects small business entities who utilize the available resources to experience lower participation and compliance costs.

108. Steps Taken to Minimize the Significant Economic Impact on Small Entities, and Significant Alternatives Considered. The RFA requires an agency to describe any significant, specifically small business, alternatives that it has considered in reaching its proposed approach, which may include the following four alternatives (among others): “(1) the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance and reporting requirements under the rule for such small entities; (3) the use of performance rather than design standards; and (4) an exemption from coverage of the rule, or any part thereof, for such small entities.”

109. The Commission has taken steps to minimize any economic impact of its auction procedures on small businesses through among other things, the many resources it provides potential auction participants. Small entities and other auction participants may seek clarification of or guidance on complying with competitive bidding rules and procedures, reporting requirements, and the FCC’s auction

bidding system. An FCC Auctions Hotline provides access to Commission staff for information about the auction process and procedures. The FCC Auctions Technical Support Hotline is another resource which provides technical assistance to applicants, including small business entities, on issues such as access to or navigation within the electronic FCC Form 175 and use of the FCC's auction bidding system. Small entities may also use the web-based, interactive online tutorial produced by Commission staff to familiarize themselves with auction procedures, filing requirements, bidding procedures, and other matters related to an auction.

110. The Commission also makes various databases and other sources of information, including the Auctions program websites, and copies of Commission decisions, available to the public without charge, providing a low-cost mechanism for small businesses to conduct research prior to and throughout the auction. Prior to and at the close of Auction 103, the Commission will post public notices on the Auctions website, which articulate the procedures and deadlines for the auction. The Commission makes this information easily accessible and without charge to benefit all Auction 103 applicants, including small businesses, thereby lowering their administrative costs to comply with the Commission's competitive bidding rules.

111. Prior to the start of bidding, eligible bidders are given an opportunity to become familiar with auction procedures and the bidding system by participating in a mock auction. Further, the Commission intends to conduct Auction 103 electronically over the Internet using its web-based auction system that eliminates the need for bidders to be physically present in a specific location. Qualified bidders also have the option to place bids by telephone. These mechanisms are made available to facilitate participation in Auction 103 by all eligible bidders and may result in significant cost savings for small business entities who use these alternatives. Moreover, the adoption of bidding procedures in advance of the auction, consistent with statutory directive, is designed to ensure that the auction will be administered predictably and fairly for all participants, including small businesses.

112. For Auction 103, the Commission proposes a \$25 million cap on the total amount of bidding credits that may be awarded to an eligible small business and a \$10 million cap on the total

amount of bidding credits that may be awarded to a rural service provider. In addition, the Commission proposes a \$10 million cap on the overall amount of bidding credits that any winning small business bidder may apply to winning licenses in markets with a population of 500,000 or less. Based on the technical characteristics of the UMFUS bands and the Commission's analysis of past auction data, the Commission anticipates that the proposed caps will allow the majority of small businesses to take full advantage of the bidding credit program, thereby lowering the relative costs of participation for small businesses.

113. These proposed procedures for the conduct of Auction 103 constitute the more specific implementation of the competitive bidding rules contemplated by Parts 1 and 30 of the Commission's rules and the underlying rulemaking orders, including the Spectrum Frontiers Fourth R&O, 2017 Spectrum Frontiers Order, 2016 Spectrum Frontiers Order, and relevant competitive bidding orders, and are fully consistent therewith.

114. Federal Rules that May Duplicate, Overlap, or Conflict with the Proposed Rules. None.

115. Ex Parte Rules. This proceeding has been designated as a "permit-but-disclose" proceeding in accordance with the Commission's ex parte rules. Persons making oral ex parte presentations must file a copy of any written presentations or memoranda summarizing any oral presentation within two business days after the presentation (unless a different deadline applicable to the Sunshine Period applies). Persons making oral ex parte presentations are reminded that memoranda summarizing the presentations must (1) list all persons attending or otherwise participating in the meeting at which the ex parte presentation was made, and (2) summarize all data presented and arguments made during the presentation. If the presentation consisted in whole or in part of the presentation of data or arguments already reflected in the presenter's written comments, memoranda, or other filings in the proceeding, the presenter may provide citations to such data or arguments in his or her prior comments, memoranda, or other filings (specifying the relevant page and/or paragraph numbers where such data or arguments can be found) in lieu of summarizing them in the memorandum. Documents shown or given to the Commission staff during ex parte meetings are deemed to be written ex parte presentations and

must be filed consistent with rule 1.1206(b). In proceedings governed by rule 1.49(f) or for which the Commission has made available a method of electronic filing, written ex parte presentations and memoranda summarizing oral ex parte presentations, and all attachments thereto, must be filed through the electronic comment filing system available for that proceeding, and must be filed in their native format (e.g., .doc, .xml, .ppt, searchable .pdf). Participants in this proceeding should familiarize themselves with the Commission's ex parte rules.

**Federal Communications Commission.**

**Marlene Dortch,**

**Secretary.**

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